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MONTHLY NOTICES

OF THE

ROYAL ASTRONOMICAL SOCIETY.

VOL. LXV. MARCH 10, 1905. No. 5

W. H. MAW, Esq., PRESIDENT, in the Chair.

Brandon T. Brierley, F.G.S., Assoc.M.Inst.C.E., Linthwaite, Delph, near Oldham, Yorkshire ;
Maurice Farman, Observatoire de Chevreuse, à Jagny, par Dampierre, Seine-et-Oise, France ;
Willie Venner Merrifield, B.A., Liverpool Corporation Nautical College, Liverpool ; and 5 Green Bank, Waterloo, near Liverpool ;
Isaac Molloy, M.A., Lützen, Glenageary, Kingstown, Dublin ;
Alfred Edward Nicholls, King Edward VII. Nautical School, London, E. ; and Cotswold, Hornchurch, Essex ; and
John Wearing, Garsdale, Sedbergh, Yorkshire,

were balloted for and duly elected Fellows of the Society.

The following candidates were proposed for election as Fellows of the Society, the names of the proposers from personal knowledge being appended :

Scriven Bolton, 24 Kensington Terrace, Hyde Park, Leeds (proposed by Richard Kerr) ;
Bahne Bonniksen, 16 Norfolk Street, Coventry (proposed by Richard Inwards) ;
Edward Turner Cottingham, Scientific Instrument Maker, The Limes, Thrapston (proposed by Julien Tripplin) ;
William George Hooper, Wiverton House, Musters Road, West Bridgford, Nottingham (proposed by Richard Kerr) ;

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Percy Marshall, Librarian, Filey House, Livingstone Road, Scarborough, Yorkshire (proposed by the Rev. T. E. R. Phillips); and

Karl Pearson, M.A., LL.B., F.R.S., Professor of Applied Mathematics and Mechanics, University College, London; 7 Well Road, Hampstead, N.W. (proposed by H. H. Turner).

Ninety presents were announced as having been received since the last ordinary meeting, including, among others:

Six volumes of M.S. Meridian observations made at the Madras Observatory, 1840–51, presented by the India Office; forty charts of the Astrographic Chart of the Heavens, presented by the Royal Observatory, Greenwich; stereoscopic views of the stars, presented by T. E. Heath.

A Determination of the Constant of Precession and the Direction of the Solar Motion from a Comparison of Groombridge's Catalogue (1810) *with Modern Greenwich Observations.* By F. W. Dyson, M.A., F.R.S., and W. G. Thackeray.

As a preliminary to the determination of the precession and solar motion an analysis is made of the distribution and proper motions of the stars in terms of star magnitude, size of proper motion, and type of spectrum. Among other results of these analyses the following, which have a direct bearing on the main purpose of the paper, may be cited:

1 (*a*) The two most symmetrical distributions of stars are those of

(*α*) Type II.

(*β*) Total centennial proper motions, between 5″ and 10″.

b. Small proper motions aggregate about 0^h as compared with 12^h.

c. Large proper motions about 18^h are more numerous than might be expected.

2. The values found for the precessional constants are:

$$\text{For 1850 the value of } m = 46''\!\cdot\!0757$$
$$n = 20\cdot0531$$

implying an increase to Newcomb's values of $\frac{1}{10000}$th part.

3. In the determination of the solar apex the following systematic discordances occur which cannot be explained by instrumental errors:

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